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EXAMINER
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THOMPSON, JAMES A

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/803,441

Applicant(s)

LEHMEIER ET AL.

Examiner

James A. Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-14 and 18-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/19/05, 4/11/05.</u>   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments filed 19 January 2005 have been fully considered but they are not persuasive.

**Regarding page 9, lines 8-24:** Applicant's arguments are based on the amendments to the claims and not the claims as originally filed. New grounds of rejection necessitated by the amendments to the claims are given below.

**Regarding page 9, line 25 to page 10, line 9:** The original claim 17, now cancelled, specifically recited *inter alia* the limitation "computer readable program code *for selecting* one of the plurality of colors as said color to be matched" [emphasis added]. In other words, the computer readable program code is for the purpose and function of selecting one of said plurality of colors. There is nothing in the language of claim 17 that specifies that a user cannot use said computer readable program code in the selection of one of the plurality of colors. Further, even assuming *arguendo* that the computer readable program code taught by Ringland (US Patent 5,751,829) has to select the color, a computer readable program code is provided in the teachings of Edgar (US Patent 5,598,186). It would have been a simple and obvious matter to one of ordinary skill in the art at the time of the invention to have computer readable program code automatically carry out processes which a secondary reference teaches a user performing manually.

**Regarding page 10, lines 10-15:** Applicant's arguments are based on the amendments to the claims and not the claims as originally filed. New grounds of rejection necessitated by the amendments to the claims are given below.

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Regarding page 10, line 16 to page 11, line 8: Claim 9 specifically recites "processing said color image data signal to remove the *influence* of said texture from the color image data signal" [emphasis added]. Note that claim 9, as currently recited, does not claim that the texture is removed, but that the *influence* of said texture is removed. By performing the color processing based solely on the target color (column 5, lines 28-31 of Bar (US Patent 5,506,946)), and not the texture of the region (column 5, lines 31-38 of Bar), the *influence* of the texture is negated. Thus, the *influence* of the texture is removed by making the texture irrelevant to the color image data processing.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-5, 8, 10-11 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US Patent 5,598,186) in view of Ringland (US Patent 5,751,829) and Knight (US Patent 6,344,853 B1).

Regarding claim 1: Edgar discloses scanning an object (column 7, lines 50-54 of Edgar) having the color to be matched (column 6, lines 18-21 of Edgar) to produce a color image data signal representative of said object (column 7, lines 50-54 of

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Edgar); and mapping said color image data signal to the defined color space to ascertain the corresponding color (figure 6 and column 6, lines 27-32 of Edgar).

Edgar does not disclose expressly determining an identity of the corresponding color; and sending the identity of the corresponding color over a network to a website.

Ringland discloses determining an identity of the corresponding color (column 17, lines 14-17 of Ringland); and informing a user of the corresponding color (figure 5(502) and column 18, lines 59-62 of Ringland).

Edgar and Ringland are combinable because they are from the same field of endeavor, namely image data processing and color matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to determine an identity of the corresponding color and inform the user of the corresponding matching color from the defined color space, as taught by Ringland. The motivation for doing so would have been to allow the user to properly match a desired color with an available color palette (column 17, lines 18-23 of Ringland). Therefore, it would have been obvious to combine Ringland with Edgar.

Edgar in view of Ringland does not disclose expressly sending the identity of the corresponding color over a network to a website.

Knight discloses sending color data over a network to a website (figure 3E(154) and column 10, lines 13-18 of Knight). In order for a user to be able to select color data on a website, said color data must be sent over a network to the website.

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Edgar in view of Ringland is combinable with Knight because they are from the same field of endeavor, namely color image data processing and matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to send the identity of the corresponding color to a user, as taught by Ringland, by sending the corresponding color data over a network to a website, as taught by Knight. The motivation for doing so would have been to allow for a selection of a desired color from among the available colors. Therefore, it would have been obvious to combine Knight with Edgar in view of Ringland to obtain the invention as specified in claim 1.

**Regarding claim 3:** Edgar discloses that the corresponding color comprises a reference number (figure 6(110) and column 6, lines 28-31 of Edgar).

Edgar does not disclose expressly that sending the identity of the corresponding color comprises sending the reference number associated with said corresponding color.

Ringland discloses sending the reference number associated with said corresponding color (figure 6(614); column 17, lines 7-10; and column 19, lines 12-15 of Ringland).

Edgar and Ringland are combinable because they are from the same field of endeavor, namely image data processing and color matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to specifically display the reference number associated with the matching color, as taught by Ringland. The motivation for doing so would have been to allow the user to search for a color based on the Pantone reference number (column 17, lines 7-13 of Ringland). Therefore, it would have been obvious to combine Ringland with Edgar to obtain the invention as specified in claim 3.

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**Regarding claim 4:** Edgar discloses using said reference number to match a color with the color to be matched (column 6, lines 30-35 of Edgar).

**Further regarding claim 5:** Ringland discloses displaying said reference number (figure 6(614) and column 19, lines 12-15 of Ringland).

**Regarding claim 8:** Edgar does not disclose expressly that said object comprises a plurality of colors, and further comprising selecting one of said plurality of colors as said color to be matched.

Ringland discloses a plurality of colors and selecting one of said plurality of colors as said color to be matched (column 17, lines 1-3 and lines 15-17 of Ringland).

Edgar and Ringland are combinable because they are from the same field of endeavor, namely image data processing and color matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to select a color to be matched from a plurality of colors, as taught by Ringland. The motivation for doing so would have been to allow a user to match the color of a particular item as close as possible to the set of available colors (column 17, lines 19-23 of Ringland). Therefore, it would have been obvious to combine Ringland with Edgar to obtain the invention as specified in claim 8.

**Further regarding claim 10:** Ringland discloses that said defined color space comprises the Pantone Matching System (column 17, lines 19-22 of Ringland).

**Regarding claim 11:** Edgar discloses that mapping said color image data signal to the defined color space to ascertain the corresponding color (column 6, lines 35-39 of Edgar)

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comprises using a color look-up table (figure 6(114-118) and column 7, line 64 to column 8, line 1 of Edgar). The various look-up tables (figure 6(114-118) of Edgar) are stored in a look-up table memory (figure 7(160) of Edgar) in the computer (column 7, line 64 to column 8, line 1 of Edgar).

**Further regarding claim 21:** Knight discloses that sending the identity of the corresponding color to the website (figure 3E(154) and column 10, lines 13-18 of Knight) comprises sending the identity of the corresponding color to a shopping website for purchasing a product having a corresponding color (column 10, lines 13-20 of Knight).

4. Claims 14 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US Patent 5,598,186) in view of Ringland (US Patent 5,751,829).

**Regarding claim 14:** Edgar discloses a system (figure 7 of Edgar) comprising a scanning apparatus (figure 7(146) of Edgar), said scanning apparatus to scan an object (column 7, lines 50-54 of Edgar) having the color to be matched (column 6, lines 18-21 of Edgar), said scanner apparatus to produce a color image data signal representative of said object (column 7, lines 50-54 of Edgar); and a computer (figure 7(142) of Edgar) operatively associated with said scanner apparatus (as can clearly be seen in figure 7 of Edgar). Said computer, in response to a user selection (column 7, lines 58-60 of Edgar), maps a portion of said color image data signal to the defined color space to ascertain an identity of the corresponding color (figure 6 and column 6, lines 27-32 of Edgar).

Edgar does not disclose expressly that said computer, in response to a user selection, selects a color region of the



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color image data signal representative of said object; determines a dominant color from a plurality of colors in the selected color region; maps a portion of said color image data signal corresponding to the dominant color to the defined color space to ascertain an identity of the corresponding color; and presents the identity of the corresponding color to a user.

Ringland discloses, in response to a user selection, selecting a color region of the color image data signal representative of said object (column 19, lines 38-42 of Ringland); determining a dominant color from a plurality of colors in the selected color region (column 19, lines 38-41 and lines 56-61 of Ringland); mapping a portion of said color image data signal corresponding to the dominant color (column 19, lines 38-42 of Ringland) to the defined color space to ascertain an identity of the corresponding color (column 19, lines 47-51 of Ringland); and presenting the identity of the corresponding color to a user (column 20, lines 9-14 of Ringland).

Edgar and Ringland are combinable because they are from the same field of endeavor, namely image data processing and color matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to allow a user to select a region from which a dominant color is determined and matched and then the identity of the corresponding matching color from the defined color space presented to the user, as taught by Ringland. The motivation for doing so would have been to allow the user to properly match a desired color with an available color palette (column 17, lines 18-23 of Ringland). Therefore, it would have been obvious to combine Ringland with Edgar to obtain the invention as specified in claim 14.

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**Regarding claim 19:** Edgar discloses at least one computer readable storage device (figure 7(158) of Edgar) operatively associated with said computer (as can clearly be seen in figure 7 of Edgar); and a color look-up table (figure 7 (160) of Edgar) stored on the at least one computer readable storage device (column 7, line 64 to column 8, line 1 of Edgar), said computer using the color look-up table when mapping said portion of the color image data signal to the defined color space to ascertain the identity of the corresponding color (column 6, lines 35-39 of Edgar). The various look-up tables (figure 6(114-118) of Edgar) are stored in a look-up table memory (figure 7(160) of Edgar) in the computer (column 7, line 64 to column 8, line 1 of Edgar).

**Further regarding claim 20:** Ringland discloses that said defined color space comprises the Pantone Matching System (column 17, lines 19-22 of Ringland).

5. Claims 6-7, 9 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US Patent 5,598,186) in view of Ringland (US Patent 5,751,829), Knight (US Patent 6,344,853 B1), and Bar (US Patent 5,506,946).

**Regarding claim 6:** Edgar in view of Ringland and Knight does not disclose expressly selecting a color region on said object, the color region containing said color to be matched.

Bar discloses selecting a color region on said object (figure 2(204) and column 10, lines 35-37 of Bar), the color region containing said color to be modified (column 10, lines 37-39 of Bar).

Edgar in view of Ringland and Knight is combinable with Bar because they are from the same field of endeavor, namely image

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data and color processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to select a particular region of color and modify said color, as taught by Bar, wherein said modification is the color matching taught by Ringland. The motivation for doing so would have been to allow a user to select a particular color in a particular region of an image (column 10, lines 37-42 of Bar), and thus allow the user to match the color of portions of an item that is scanned in. Therefore, it would have been obvious to combine Bar with Edgar in view of Ringland and Knight to obtain the invention as specified in claim 6.

**Regarding claim 7:** Edgar in view of Ringland and Knight does not disclose expressly selecting a color region of said color image data signal, the color region containing said color to be matched.

Bar discloses selecting a color region of said color image data signal (figure 2(204) and column 10, lines 35-37 of Bar), the color region containing the color to be modified (column 10, lines 37-39 of Bar).

Edgar in view of Ringland and Knight is combinable with Bar because they are from the same field of endeavor, namely image data and color processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to select a particular region of color and modify said color, as taught by Bar, wherein said modification is the color matching taught by Ringland. The motivation for doing so would have been to allow a user to select a particular color in a particular region of an image (column 10, lines 37-42 of Bar), and thus allow the user to match the color of portions of an item that is scanned in. Therefore, it would have been obvious to combine

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Bar with Edgar in view of Ringland and Knight to obtain the invention as specified in claim 7.

**Regarding claim 9:** Edgar in view of Ringland and Knight does not disclose expressly that said object has a texture and processing said color image data signal to remove the influence of said texture from said color image data signal.

Bar discloses removing the influence of the texture from said color image data signal (column 5, lines 31-38 of Bar). By specifically preserving the overall texture of the color image signal region (column 5, lines 31-38 of Bar), the influence of said texture is removed. The color processing is affected by the target color (column 5, lines 28-31 of Bar) and not the texture of the region (column 5, lines 31-38 of Bar).

Edgar in view of Ringland and Knight is combinable with Bar because they are from the same field of endeavor, namely image data and color processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to remove the effect that texture has upon the processing of the color image signal data, as taught by Bar. The motivation for doing so would have been to preserve the texture of a region while still being able to modify the color of said region (column 1, lines 39-44 of Bar). Therefore, it would have been obvious to combine Bar with Edgar in view of Ringland and Knight to obtain the invention as specified in claim 9.

**Regarding claim 12:** Edgar discloses that said color image data signal comprises a plurality of pixels (column 6, lines 5-7 of Edgar), each having a red tristimulus value, a green tristimulus value, and a blue tristimulus value associated therewith (column 6, lines 7-9 of Edgar). Mapping said color image data signal to the defined color space to ascertain the

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corresponding color further comprises inputting the red, green, and blue tristimulus values into said color look-up table to obtain the corresponding color (column 6, lines 9-14 of Edgar).

Edgar in view of Ringland and Knight does not disclose expressly computing an average red tristimulus value, an average green tristimulus value, and an average blue tristimulus value from the red, green, and blue tristimulus values of one or more of said plurality of pixels; and that said average red tristimulus value, said average green tristimulus value, and said average blue tristimulus value are the values inputted into said look-up table.

Bar discloses computing an average red tristimulus value, an average green tristimulus value, and an average blue tristimulus value from the red, green, and blue tristimulus values of one or more of said plurality of pixels (column 6, lines 7-9 and column 10, lines 52-56 of Bar).

Edgar in view of Ringland and Knight is combinable with Bar because they are from the same field of endeavor, namely image data and color processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to compute the average RGB values for the color region, as taught by Bar, and use said average RGB values as the input to the look-up tables taught by Edgar. The motivation for doing so would have been that the modification of the color occurs for the entire region based on the target color (column 5, lines 28-35 of Bar). Therefore, it would have been obvious to combine Bar with Edgar in view of Ringland and Knight to obtain the invention as specified in claim 12.

**Regarding claim 13:** Edgar discloses that said color image data signal comprises a plurality of pixels (column 6, lines 5-7

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of Edgar), each having a red tristimulus value, a green tristimulus value, and a blue tristimulus value associated therewith (column 6, lines 7-9 of Edgar). Mapping said color image data signal to the defined color space to ascertain the corresponding color further comprises inputting the red, green, and blue tristimulus values of one or more of said plurality of pixels into said color look-up table (column 6, lines 9-14 of Edgar) to obtain one or more reference numbers, said reference number identifying said corresponding color (figure 6(110) and column 6, lines 28-31 of Edgar).

Edgar in view of Ringland and Knight does not disclose expressly computing an average reference number from said one or more reference numbers; and that said average reference number identifies said corresponding color.

Bar discloses computing the average colorimetric values for a specified color image data signal region (column 10, lines 52-56 of Bar).

Edgar in view of Ringland and Knight is combinable with Bar because they are from the same field of endeavor, namely image data and color processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to compute the average colorimetric values for the color region, as taught by Bar, said average values being the reference number values taught by Edgar. Since said reference number values are directly mapped to the color values (column 6, lines 28-31 of Edgar), computing said average colorimetric values and then computing the mapping of said colorimetric values will result in the computation of said average reference number. Further, said average reference number would therefore identify said corresponding color. The motivation for doing so would have

been that the modification of the color occurs for the entire region based on the target color (column 5, lines 28-35 of Bar). Therefore, it would have been obvious to combine Bar with Edgar in view of Ringland and Knight to obtain the invention as specified in claim 13.

6. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US Patent 5,598,186) in view of Ringland (US Patent 5,751,829) and Bar (US Patent 5,506,946).

**Regarding claim 18:** Edgar discloses at least one computer readable storage device (figure 7(158) of Edgar) operatively associated with said computer (as can clearly be seen in figure 7 of Edgar).

Edgar in view of Ringland does not disclose expressly computer readable program code for removing the influence of the texture from said color image data signal, the computer readable program code being stored on said at least one computer readable storage device.

Bar discloses computer readable program code (column 4, lines 26-29 of Bar) for removing the influence of the texture from said color image data signal (column 5, lines 31-38 of Bar). By specifically preserving the overall texture of the color image signal region (column 5, lines 31-38 of Bar), the influence of said texture is removed. The color processing is affected by the target color (column 5, lines 28-31 of Bar) and not the texture of the region (column 5, lines 31-38 of Bar). Since the invention of Bar operates on a computer (column 4, lines 26-29 of Bar), program code for performing the functions of said invention is inherent. Further, it is inherent that the computer readable program code is stored on at least one

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computer readable storage device, such as the RAM (figure 1(106) of Bar) or the ROM (figure 1(105) and column 4, lines 35-36 of Bar), since said program code must be stored in some form of memory in order to be accessible by the computer.

Edgar in view of Ringland is combinable with Bar because they are from the same field of endeavor, namely image data and color processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to remove the effect that texture has upon the processing of the color image signal data, as taught by Bar. The motivation for doing so would have been to preserve the texture of a region while still being able to modify the color of said region (column 1, lines 39-44 of Bar). Therefore, it would have been obvious to combine Bar with Edgar in view of Ringland to obtain the invention as specified in claim 18.

7. Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US Patent 5,598,186) in view of Ringland (US Patent 5,751,829), Knight (US Patent 6,344,853 B1), Bar (US Patent 5,506,946), and Liu (US Patent 5,594,807).

**Regarding claim 22:** Edgar discloses mapping said color image data signal to the defined color space to ascertain the corresponding color (figure 6 and column 6, lines 27-32 of Edgar); and mapping a portion of said color image data signal to corresponding to the dominant color to the defined color space (figure 6 and column 6, lines 27-32 of Edgar).

Edgar in view of Ringland, Knight and Bar does not disclose expressly randomly selecting pixels in the selected color region; and mapping a portion of the color image data signal



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corresponding to the randomly selected pixels to the defined color space.

Liu discloses randomly selecting pixels in a selected color region (column 20, lines 11-16 of Liu).

Edgar in view of Ringland, Knight and Bar is combinable with Liu because they are from the same field of endeavor, namely digital color image data processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to randomly select pixel from a color image, as taught by Liu. Thus, it will be the randomly selected color taught by Liu that is mapped to the defined color space rather than necessarily the dominant color, as taught by Edgar. The motivation for doing so would have been to reduce the computational requirements for automatically finding an appropriate reference pixel for the image area (column 20, lines 18-23 of Liu). Computational optimization of this sort is a common reason to use Monte-Carlo randomization in computations. Therefore, it would have been obvious to combine Liu with Edgar in view of Ringland, Knight and Bar to obtain the invention as specified in claim 22.

**Regarding claim 23:** Ringland discloses determining a dominant color from a plurality of colors in the selected color region (column 19, lines 38-41 and lines 56-61 of Ringland); and mapping a portion of said color image data signal corresponding to the determined dominant color (column 19, lines 38-42 of Ringland) to the defined color space (column 19, lines 47-51 of Ringland).

Edgar in view of Ringland, Knight and Bar does not disclose expressly that said dominant color is selected using histograms representing respective colors.

Liu discloses determining a dominant color using histograms representing respective colors (figure 4; figure 5; and column 9, lines 56-67 of Liu).

Edgar in view of Ringland, Knight and Bar is combinable with Liu because they are from the same field of endeavor, namely digital color image data processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a histogram representing respective colors to select a dominant color, as taught by Liu. The motivation for doing so would have been to be able to determine to what extent particular pixel values in the color image data are true signal representations and to what extent each particular pixel value represents the image noise variations from "real" color and intensity values, thus providing a more genuine representation (column 9, lines 49-56 of Liu). Therefore, it would have been obvious to combine Liu with Edgar in view of Ringland, Knight and Bar to obtain the invention as specified in claim 23.

8. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US Patent 5,598,186) in view of Ringland (US Patent 5,751,829) and Liu (US Patent 5,594,807).

**Regarding claim 24:** Edgar in view of Ringland does not disclose expressly that the computer determines the dominant color in the selected color region using histograms representing the plurality of colors.

Liu discloses determining a dominant color using histograms representing respective colors (figure 4; figure 5; and column 9, lines 56-67 of Liu).

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Edgar in view of Ringland is combinable with Liu because they are from the same field of endeavor, namely digital color image data processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a histogram representing respective colors to select a dominant color, as taught by Liu. The motivation for doing so would have been to be able to determine to what extent particular pixel values in the color image data are true signal representations and to what extent each particular pixel value represents the image noise variations from "real" color and intensity values, thus providing a more genuine representation (column 9, lines 49-56 of Liu). Therefore, it would have been obvious to combine Liu with Edgar in view of Ringland to obtain the invention as specified in claim 24.

9. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US Patent 5,598,186) in view of Azumaya (US Patent 5,465,307).

**Regarding claim 25:** Edgar discloses an article (figure 7 of Edgar) comprising a storage device containing program code that when executed causes a system (column 7, lines 45-50 of Edgar) to receive color image data representing an object scanned by a scanner (column 7, lines 50-54 of Edgar); and map the color image data to determine a corresponding color in a defined color space (figure 6 and column 6, lines 27-32 of Edgar).

Edgar does not disclose expressly that said object has a texture; and processing the color image data to remove the influence of the texture, the processing producing de-texturized color image data.

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Azumaya discloses a color image data object that has a texture (column 7, lines 18-23 of Azumaya); and processing the color image data to remove the influence of the texture, the processing producing de-texturized color image data (column 9, lines 9-15 of Azumaya).

Edgar and Azumaya are combinable because they are from the same field of endeavor, namely digital color image data processing in specific image areas. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to de-texturize the color image data, as taught by Azumaya. Further, by combining Azumaya with Edgar, the color image data that is mapped according to the teachings of Edgar would be de-texturized color image data. The motivation for doing so would have been that there are many different types of papers that an image can be scanned from, each with different textures and densities (column 7, lines 51-53 of Azumaya). Thus, a proper input image should naturally account for the different kinds of background media available. Therefore, it would have been obvious to combine Azumaya with Edgar to obtain the invention as specified in claim 25.

10. Claims 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US Patent 5,598,186) in view of Azumaya (US Patent 5,465,307) and Knight (US Patent 6,344,853 B1).

**Regarding claim 26:** Edgar in view of Azumaya does not disclose expressly sending the identity of the corresponding color over a network to a website.

Knight discloses sending color data over a network to a website (figure 3E(154) and column 10, lines 13-18 of Knight). In order for a user to be able to select color data on a

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website, said color data must be sent over a network to the website.

Edgar in view of Azumaya is combinable with Knight because they are from the same field of endeavor, namely color image data processing and matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to send the identity of the corresponding color over a network to a website, as taught by Knight. The motivation for doing so would have been to allow for a selection of a desired color from among the available colors. Therefore, it would have been obvious to combine Knight with Edgar in view of Azumaya to obtain the invention as specified in claim 26.

**Further regarding claim 27:** Knight discloses that sending the identity of the corresponding color to the website (figure 3E(154) and column 10, lines 13-18 of Knight) comprises sending the identity of the corresponding color to a shopping website for purchasing a product having a corresponding color (column 10, lines 13-20 of Knight).

11. Claims 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US Patent 5,598,186) in view of Knight (US Patent 6,344,853 B1).

**Regarding claim 28:** Edgar discloses a system (figure 7 of Edgar) comprising a storage device (on the computer) (column 7, lines 45-50 of Edgar) to store information representing a defined color space (figure 4; figure 6(112); and column 7, lines 27-31 of Edgar); receive color image data representing an object scanned by a scanner (column 7, lines 50-54 of Edgar); and map the color image data to a corresponding color in the

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defined color space (figure 6 and column 6, lines 27-32 of Edgar).

Edgar does not disclose expressly communicating the identity of the corresponding color to a website.

Knight discloses communicating the identity of a color to a website (figure 3E(154) and column 10, lines 13-18 of Knight). In order for a user to be able to select color data on a website, said color data must be sent over a network to the website.

Edgar and Knight are combinable because they are from the same field of endeavor, namely color image data processing and matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to send the identity of the corresponding color taught by Edgar to a website, as taught by Knight. The motivation for doing so would have been to allow for a selection of a desired color from among the available colors. Therefore, it would have been obvious to combine Knight with Edgar to obtain the invention as specified in claim 28.

**Further regarding claim 29:** Knight discloses that sending the identity of the corresponding color to the website (figure 3E(154) and column 10, lines 13-18 of Knight) comprises sending the identity of the corresponding color to a shopping website for purchasing a product having a corresponding color (column 10, lines 13-20 of Knight).

12. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US Patent 5,598,186) in view of Knight (US Patent 6,344,853 B1) and Ringland (US Patent 5,751,829).

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**Regarding claim 30:** Edgar discloses that said processor, in response to a user selection (column 7, lines 58-60 of Edgar), maps a portion of said color image data signal to the defined color space to ascertain an identity of the corresponding color (figure 6 and column 6, lines 27-32 of Edgar).

Edgar in view of Knight does not disclose expressly that said computer, in response to a user selection, selects a color region of the color image data; and maps a portion of the color image data corresponding to the selected color region to the defined color space.

Ringland discloses, in response to a user selection, selecting a color region of the color image data (column 19, lines 38-42 of Ringland); and mapping a portion of said color image data corresponding to the selected color region (column 19, lines 38-42 of Ringland) to the defined color space (column 19, lines 47-51 of Ringland).

Edgar in view of Knight is combinable with Ringland because they are from the same field of endeavor, namely image data processing and color matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to allow a user to select a region from which the color is mapped, as taught by Ringland. The motivation for doing so would have been to allow the user to properly match a desired color with an available color palette (column 17, lines 18-23 of Ringland). Therefore, it would have been obvious to combine Ringland with Edgar in view of Knight to obtain the invention as specified in claim 30.

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13. Claims 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US Patent 5,598,186) in view of Knight (US Patent 6,344,853 B1), Ringland (US Patent 5,751,829), and Liu (US Patent 5,594,807).

**Regarding claim 31:** Edgar discloses mapping a portion of said color image data signal to corresponding to the dominant color to the defined color space (figure 6 and column 6, lines 27-32 of Edgar).

Edgar in view of Knight and Ringland does not disclose expressly randomly selecting pixels in the selected color region; and mapping a portion of the color image data signal corresponding to the randomly selected pixels to the defined color space.

Liu discloses randomly selecting pixels in a selected color region (column 20, lines 11-16 of Liu).

Edgar in view of Knight and Ringland is combinable with Liu because they are from the same field of endeavor, namely digital color image data processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to randomly select pixel from a color image, as taught by Liu. Thus, it will be the randomly selected color taught by Liu that is mapped to the defined color space rather than necessarily the dominant color, as taught by Edgar. The motivation for doing so would have been to reduce the computational requirements for automatically finding an appropriate reference pixel for the image area (column 20, lines 18-23 of Liu). Computational optimization of this sort is a common reason to use Monte-Carlo randomization in computations. Therefore, it would have been obvious to combine Liu with Edgar in view of Knight and Ringland to obtain the invention as specified in claim 31.



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**Regarding claim 32:** Edgar discloses mapping a portion of said color image data signal to corresponding to the determined dominant color to the defined color space (figure 6 and column 6, lines 27-32 of Edgar).

Edgar in view of Knight and Ringland does not disclose expressly that said dominant color is selected using histograms representing respective colors.

Liu discloses determining a dominant color using histograms representing respective colors (figure 4; figure 5; and column 9, lines 56-67 of Liu).

Edgar in view of Knight and Ringland is combinable with Liu because they are from the same field of endeavor, namely digital color image data processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a histogram representing respective colors to select a dominant color, as taught by Liu. The motivation for doing so would have been to be able to determine to what extent particular pixel values in the color image data are true signal representations and to what extent each particular pixel value represents the image noise variations from "real" color and intensity values, thus providing a more genuine representation (column 9, lines 49-56 of Liu). Therefore, it would have been obvious to combine Liu with Edgar in view of Knight and Ringland to obtain the invention as specified in claim 32.

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**Conclusion**

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James A. Thompson  
Examiner  
Art Unit 2624

JAT  
19 May 2005



THOMAS D.  
~~LEE~~  
PRIMARY EXAMINER